DOCUMENT RESUME

ED 259 667 HE 018 548

AUTHOR Nelson, David; Heeney, William
TITLE Using a Program Level Planning Model as a Tool for Evaluating Educational Change.
PUB DATE Feb 85
NOTE 26p.; Paper presented at the American Association of Colleges for Teacher Education (February, 1985).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *College Planning; Decentralization; Decision Making; Educational Change; *Evaluation Methods; Higher Education; *Models; *Program Development; *Program Evaluation

ABSTRACT

Program Level Planning, a model based upon decentralized decision making, is proposed as a method to move the planning process to the university's operational level. After describing the characteristics and steps of Program Level Planning, the problems in shifting the decision making to the local level are considered, along with the application of such planning to a comprehensive management system. In addition to identifying 13 planning principles, the need for school/college/department program evaluation is discussed, and the literature on accepted program evaluation procedures is reviewed. Based on analysis of the concepts and frameworks found in the literature, the following stages of program planning and evaluation are recommended: deciding to plan or evaluate a program; defining the context of the issue; explaining the initial course of action; designing alternative causal impact models; matching alternative research designs with each causal impact model; expressing goals in measurable terms; collecting data based on the issues, policy, impact model, and research design; and analyzing, interpreting, and reporting data within the context of the issue. Since the framework is not necessarily a stepwise procedure, interface is possible between program planning and evaluation. An application of the model is illustrated. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED259667

USING A PROGRAM LEVEL PLANNING MODEL AS A TOOL FOR EVALUATING EDUCATIONAL CHANGE

BY

David Nelson
Washburn University

William Heeney
Stephen F. Austin State University

A paper presented at

American Association of Colleges for Teacher Education

February, 1985

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

David Nelson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

HE018548

BEST COPY AVAILABLE

USING A PROGRAM LEVEL PLANNING MODEL AS A TOOL FOR EVALUATING EDUCATIONAL CHANGE

BY

David Nelson
Washburn University

William Heeney
Stephen F. Austin State University

The recent criticism of higher education has served to reinforce the idea that responsibility for solving most educational problems remains at the departmental or program level. Two conditions in the current situation support the validity of this statement. First, it appears that a fundamental shift away from centralized initiative for educational improvement is occurring at national, state, and institutional levels as educational policies are guided by the principles of disengagement and deregulation. Second, researchers attempting to identify the instructionally effective school (Edmonds, 1979; Rutter, 1980; Brookover, 1979; Hersh, 1981; and Nelson, 1983) have found several factors within the context of individual academic programs that appear significant in promoting greater student competence and heightened faculty productivity. Features such as clearly identified learning outcomes, tightly coupled curriculum, and mutually shared goals all suggest that universities must engage in planning and evaluating all academic programs. The school/college/department is the logical starting point for solutions to the vast array of program problems that must be resolved.

Opinions differ widely, however, about how well schools/colleges/departments are prepared to assume this responsibility. On the one hand, Wise

(1979) has pointed out that individual departments have not done very well in the past, and that more centralized involvement resulted from the inability of schools/colleges/departments to launch sustained improvement efforts. On the other hand, some who have reviewed recent studies of innovation and change in educational settings (Miles, 1982; Fullan, 1983) render the conclusion that because of the unique organizational characterics of universities--loose coupling, few hierarchial relationships, and low interdepence--anything short of decentralized problem solving--is doomed to failure. Our inclination is that the school/college/department can and should be an effective academic unit for educational improvement, but only if we find appropriate structures to facilitate planned change and if we identify successful processes that will increase the capacity for decentralized problem solving.

We believe that Program Level Planning, a procedure for task management and evaluation, holds promise as an arrangement for effective university administration if properly organized and sustained. In this paper we will describe the characteristics of Program Level Planning, the steps involved in this type of planning, the problems in shifting the decision making to the local level, and the application of such planning to a comprehensive management system. Consequently, the Program Level Planning Model has been developed as a vehicle to move the planning process to the operational level of a university.

PLANNING:

Planning is an activity which means different things to different people. Obviously, there are various levels of this process ranging from individual, personal planning to multi-organizations planning that involves many people utilizing very sophisticated approaches.

However, much evidence exists that indicates that strategic planning in the field of higher education has been largely ignored. Only recently have university administrators and faculty members alike become more aware of the many benefits that accrue within an organization when both short and long term planning occur. To this point Candoli, Hock, Ray, and Stoller have written:

> There is little in the literature or in field practice to suggest that any great effort has been expended in the orderly, systematic, coordinated creation of alternative plans for universities to use as guidelines for future actions. This paucity in planning is best reflected in the manner in which many universities have had to adopt "crash" programs to achieve certain goals and in the way accumulated pressures have led to several dislocations in educational programs.

To this same point, Martin Burlingame has written:

> While individuals know what they are about in their specific roles, for example, classroom instructor, schools as organizations do not know what they are about.

Although there have always been benefits available from good planning, certain major forces have highlighted the planning needs of educational institutions in the past number of years. Some of them are:

1. Increased (or decreased) size of academic programs.
2. Expansions of the responsibility of various academic units.
3. Changing educational goals.
4. Increased costs of educational services.
5. Civil rights and affirmative action.
6. The technological and knowledge explosions.
7. Demographic changes in student populations.

Beyond the awareness of the need for planning, lies the fundamental challenge of getting into appropriate planning provisions, techniques, models, and attitudes. In short, efforts to establish some type of planning system

or to raise an existing level of planning in an organization are faced by a number of pitfalls. Two examples of such pitfalls follow. First, one must realize that many of the questions that should be asked by the administration change as planning becomes more visible. Hostrop has written clearly to this point:

> In the final analysis, what distinguishes the manager from the non-manager is his educational contribution. The manager is uniquely expected to give others vision and to provide the climate for them to effectively perform their jobs.
>
> The manager has a specific tool: information. He does not "handle" people, he motivates, guides, organizes others to do their own work be they sub-administrators, teachers, or students. The manager's effectiveness depends upon his ability to listen and to read, or his ability to speak and to write.
>
> Too often, however, managers make decisions on the wrong questions. Effective managers spend considerably more time on determining the right questions to ask than on finding the right answers which all too often are to the wrong questions. The right questions should usually pertain to recurring problems rather than responding to an immediate crisis which, more often than not, is rooted in fundamental questions that have not yet been clearly asked. Until the right questions are posed, crisis administration will endure rather than preventive management.

In other instances, many perceptions held by persons within and outside of the organization have to be changed or modified as planning becomes more defined. Of course, one of the outcomes of the involvement of people in planning activities centers around the desired changes in this area. Stephen P. Robbins has given a concise description of personal perceptions as opposed to reality itself. He wrote:

> Individuals behave in a given way or form certain attitudes based not on the way their external environment actually is but rather on what they see or believe it to be. Because individuals act on their interpretations of reality rather than reality itself, it is clear that perception must be a critical determinant of our dependent variable.
>
> An organization may spend millions of dollars to create a pleasant work environment for its employees. However, in spite of these

expenditures, if an employee believes her job is lousy, she will behave accordingly. It is her perception of a situation that becomes the basis on which she behaves. The employee who perceives her superior as a hurdle-reducer and an aide to help her do a better job and the employee who sees the supervisor as "big brother, closely monitoring every motion, to insure that I keep working" will differ in their behavioral responses to their supervisor. The difference has nothing to do with the reality of the supervisor's role; the difference in behavior is due to different perceptions.

With some recognition to awareness given and the general nature of the challenge better understood, what are the main ingredients in a Program Level Planning System? After a number of years in dealing with this issue, we have come to believe that the budget (beyond simply dealing with revenues and expenditures) is essentially the control part of the system in implementing and sustaining the planning decisions that have been made. In spite of what one may think about fiscal resources, simply stated, with money academic goals can be accomplished but without adequate funding implementation of planned and mandated change is impossible. Therefore, the act of appropriating funds determines the activities which will be performed during the timeframe contained within the appropriations period.

On the other hand, we have come to believe that planning, in the most fundamental sense, is a series of complex, written agreements (as to what will take place in the future) among those individuals within and external to the organization who have a significant investment in the direction of the organization. In addition to the two foregoing beliefs, it seems that every educational organization must have a set of principles concerning planning, some basic definitions, and a system which incorporates all of the above in order to bring planning to an operational level within the organization.

Some principles concerning planning:

A. Appropriate, pre-determined procedures should be used in order to modify, delete, or add a program or a service.

1. Places responsibility where effective justification or change can occur.

2. Maintains sense of stability, on the long-term, within the organization.

3. Encourages visable, vibrant, effective efforts through-out an organization.

4. Relate goals to the "wherewithal" to implement.

B. Those within the organization that directly utilize an appropriated resources should share in decision making about that which they use.

1. Faculty members and staff personnel (equipment, materials, support service.

2. Unit administrators (priorities within each unit including personnel in addition to #1).

C. Clarity should prevail within an organization as to the necessary scope of funding for all parts of the organization, not simply special interest parts.

1. Highly promoted programs as opposed to necessary but more routine programs.

2. "People" vs "Things" - an understanding.

D. An operational level "language" is vital to maintain understanding of program needs and funding levels.

E. An organization should have a means to realistically assess where it is in its level of operation.

F. Each program and/or administrative unit should have an equal opportunity to justify its needs.

G. When controllable events occur concerning resources that have a direct impact on programs, all should know the specifics and be required to modify accordingly.

H. An organization needs a capability to determine if it has been where it intended to be.

I. Planning encompasses the total system and its needs.

J. The diversity of skills needed to mount a planning function is a "team" effort and not a one-person show.

K. The planning role must be separated from the operational role so the resources are available to carry out the planning tasks.

L. There should be day-to-day operational interfaces with the planning data.

M. In the beginning phases of the implementation of a planning system, immediate problems should be dealt with on the way to short-term planning (approximately a 5 year period) and long-term planning (up to 10-20 year period).

Systems:

I. Purposes for any system:

a. Establish goals.

b. Develop programs reflecting goals.

c. Identify resources needed to implement programs.

d. Allocate physical and human resources.

e. Evaluate in order to get continual plan development.

II. Decentralized systems:

a. A well-planned reallocation of the decision-making power in order to increase the quality and effectiveness of the total system.

III. Centralized systems:

a. Planning leader, financial planner, curriculum planner, facilities planner and evaluation specialist.

The circumstances within each organization will certainly have a significant effect on the type of system adopted. A decentralized system will, at times, produce an environment that is perceived to be too "loose" or unclear as opposed to a centralized system that is, at times perceived to be too "rigid" or "inflexible".

Terminology:

1. Unit goals -

2. Unit priorities -

3. Organizational goals -

4. Organizational priorities -
5. Program development model -
6. Written plans of instruction -
7. Professional statement for curriculum -
8. Role relationships -
   a. Policy area -
   b. Management area -
   c. Program area -
9. Planning sheets -
10. Fund and chart of accounts structure -
11. Budget contingencies -
12. Funding levels -
13. Rate of implementation -
14. Guide of study materials for implementation in the organization -

(Note: See attachments for examples and other key terms.)

Summary:

As mentioned, Program Level Planning is a model based upon decentralized decision making. It must be understood, however, that the size and nature of each organization influences various considerations with a centralized or a decentralized system. The following advantages are presented when an institution adopts the Program Level Planning System (or other planning model).

1. Unnecessary duplication of work is largely eliminated.
2. Costs which occur in duplicated work, non-essential work, and work that results from a non-adopted goal are eliminated.
3. A significant increase in the return on time management is observed.
4. Decision-making in all areas is improved.

5. Communication between faculty members and administrators is enhanced.

6. Academic services are improved.

7. Quality of academic life for faculty and staff members is improved.

There exists an urgent need to intensify planning in most institutions of higher education. At present the public and legislative attitude is that some group other than educators needs to assume educational leadership to attain an acceptable level of quality and productivity. This attitude may be found in the following statements:

1. Quality information available in higher education does not seem to be reaching non-educational community.

2. Realistic costs for academic programs need to be better understood and more efficiently calculated.

3. Existing formulas for financing teacher education need to be reexamined due to the shift from quantative assessment to qualitative competency.

EVALUATION

Evaluation, an integral component of planning, is a process followed to determine relative worth (Quade, 1979). Evaluation may be applied to a program (the results of a strategic proposal) or may be utilized for the purpose of measuring defined performance objectives. Evaluation may be applied to a completed program, an on-going program, or to the expected alternatives that evolve during the program proposal stage. Evaluation of expected alternatives is complex, requiring the comparison of expected events with and without the proposed solution alternatives. Justification of findings in futuristic evaluation is obviously more difficult to document than on-going or end-result project evaluations. Program level evaluation and program planning, although not identical, are indeed closely related and certainly complement each other because evaluation is a subset of analysis.

Program planning rarely proceeds in a straightforward manner, from the definition of the problem to the selection of preferred action. successful planning is iterative, working both forward and backward as one's understanding of the problem deepens (Stokey and Zeckhauser, 1978). Any set of steps in evaluation must be viewed as stages that are not necessarily to be followed in sequence. Evaluation of decentralized programs is conducted to determine relative worth. Our attention is now directed toward the need for school/college/department program evaluation.

Rationale for Policy Evaluation

Dissatisfaction with academic programs (particularly teacher education) is widespread among beneficiaries of enacted policies and among those persons responsible for their delivery (Nachmias, 1979). Dissatisfaction with higher education and public schools appears to be at an all time high in the United States.

For example, the recent report of the Study Group on the Conditions of Excellence in American Higher Education (1985) has stated: "The strains of rapid expansion, followed by recent years of constricting resources and leveling enrollments, have taken their toll. The realities of student learning, curricular coherence, the quality of facilities, faculty morale and academic standards no longer measure up to our expectations. These gaps between the ideal and the actual are serious warning signals. They point to both current and potential problems that must be recognized and addressed. One cannot blame these trends entirely on the decline in the preparation of entering college students. Part of the problem is what happens to students after they matriculate in college. Knowledge about how to improve retention rates and overall student achievement is accessible, but evidently higher education is not using it fully."

Whether our educational system is as bad as indicated by this and other educational commissions, is not the object of proof or disproof here. The important point is that general dissatisfaction with the American educational system is widespread. Nothing but general evaluations and global recommendations emerged from the Commission, and, this has satisfied the general public. Simply stated, much of the evidence presented by the Commission was not based on sound research, and the recommendations are, indeed, too general and practically impossible to implement.

If we believe that once the public sector is determined to something and allocates sufficient resources, its goals will be achieved; then we are accepting a common myth. For example, consider the plight of community action programs, urban renewal, and the myths of equality of educational opportunity, and the Elementary and Secondary Education Act of 1965. In all cases the program output was clear (i.e. the bills were passed by Congress and the money was allocated, but the program impact fell short of goals and objectives (where they existed).

Evaluation in the context presented here means to assess the outcomes or impact of a proposed program (tied to a proposed program), an existing or a completed program. Evaluation should answer the following question: What will happen or happened that would not otherwise happen in the absence of the program or proposed program? Quade (1979), indicated that the reason for an evaluation is merely to provide information to decision makers on cost and effects, either expected or unexpected. Furthermore, the reason for doing an evaluation is to assist program directors in effective program management. Evaluation of proposed or existing programs is the process of assessment to provide information for futuristic or present decision making.

Evaluation may affect the allocation of resources as well as improve operations.

Existing Frameworks for Program Evaluation

At this point in the discussion, it is important to review some accepted program evaluation procedures. The review is not intended to be exhaustive, but to cover some established procedures used by policy analysts. The main concern is: what are some important components of program level evaluation? To begin the development of an answer to this question, let's review suggestions made by Quade (1979). He indicates that evaluation is a form of program analysis and recommends the following procedures:

1. The policy objectives must be delineated.
2. Alternatives for obtaining the objectives must be determined.
3. Consequences or impacts of each alternative should be ascertained.
4. Each alternative should be assigned a rank order of desirability.
5. The consequences of each choice of an alternative should be predicated with an appropriate model.

Regarding these procedures, objectives are considered as descriptors of what a decision maker desires to accomplish. In practice, the decision maker may be multiple, the State Legislature for example. In investigating governmental policy, it may be difficult to discover the true objectives because of ambiguous and abstract terms which actually imply the objectives. In smaller and less complex bodies the objectives are not necessarily any easier to determine, but fewer actors can possibly mean that the course of action is clearer.

The alternatives noted in the above process are the available means to attain the objectives. One common misconception in the world of policy evaluation is that alternatives are obvious substitutes for each other (Quade, 1979). Alternatives for reaching the objectives need not perform the same functions. For example, the extended degree plan and higher admissions

standards have been proposed as alternatives for improving education.

Impacts of each alternative may be the costs for obtaining objectives as well as the benefits. Cost may also be considered as a negative impact (Quade, 1979). A cost may be a benefit, since a person may be hired to perform a task directed toward the solution to a public problem. In the case of a proposed extended school year, the long range benefit is proposed to be a better education for the student. On the other side, the extended degree plan may be a negative factor when a four year degree is anticipated by most students, faculty, and administrators who have grown accustomed to this time frame when pursuing a career which has an entry level salary of $15,000.

The rule or standard designed to compare alternatives is defined as a criterion. The criterion allows for relative comparison among alternatives. The Bayesian method for program level evaluation (Tanner, 1971), has been offered as an appropriate methodology for comparing alternatives. The Delphi technique (Weatherman & Swenson), is also an acceptable procedure for rank ordering alternatives whereby comparisons are possible.

According to Quade (1979), the heart of any decision analysis is the existence or creation of a process that can predict the consequences of a given alternative. The process may be exemplified through models. Those used in program evaluation according to Quade, resemble scientific models, since they are comprised of a system of logical relationships such as mathematical equations. In the case of this set of evaluation guidelines, a prescriptive or optimizing model describes or predicts the future. A set of simultaneous equations that forecast a future value accompanied by an optimizing function, is an example of a decision model.

In outlining the stages of program evaluation Nachmias (1979), contends

that program evaluation research should be a constant and continuous process. He specifies six distinct, yet interrelated research operations:

1. Identification of goals
2. Construction of a causal impact model
3. Development of an appropriate research design
4. Measurement and standardization
5. Data collection
6. Data analysis and interpretation

The key in the above set of operations is the suggested constant and continuous process of evaluation. This concept is not new to the literature, but in practice, it is still in the very early phases of acceptance and usage. Frequently, it is necessary, when evaluating existing academic programs, to start with the existing program and work backward to discover the stated and implied goals. In the analysis of program proposals, the researcher may study written documents such as articles written which are relevant to the program, the debate over relevant issues, and interview key persons. For example, the members of the National Commission on Excellence in Education were handed a charter to assess the quality of teaching and learning in public and private eduational institutions. The group, within 21 months, provided a description of the perceived conditions in education in the United States. This activity simply reveals a "one shot" attempt at evaluation of a complex institution. Thus, it is easy to discover that the Commission had no systematic framework for continuous evaluation of educational operations. On the large scale there are fragmented efforts by individual states, independent research groups, university researchers, and organizations such as the American Educational Research Association. Our goals for evaluation of education in the United States are not clear.

Nachmias (1979), suggests the design of a causal impact model for comprehensive evaluation. That is, the researcher may begin by isolating behavioral and socioeconomic variables relevant to the issue and determine existing or expected relationships, from this model, various research designs could be applied to measure change over time.

Here we should be careful to note that the total evaluation process follows an interrelated pattern. The issues dictate the goals and objectives. These in turn influence the construction of a causal impact model, which dictates the research design, the types of measurement and the possible comparisons. This pattern therefore sets the stage for data collection, analysis, and interpretation.

Another approach to program level evaluation has been offered by Stokey and Zeckhauser (1978). The theme throughout their work, entitled A Primer for Program Analysis, revolves around the rational decision maker who lays out goals and uses logical processes to find the best methods for reaching those goals. First they focus upon the total context of the issue. Within this framework they alert the researcher to the fact that the design should fit the problem, not vice versa--an important component of evaluation that is often overlooked by beginning researchers. These writers frankly admit that the researcher may wish to revise their suggested framework to suit his or her operational style. In addition to this, the researcher (evaluator) should revise the methodology for the problem under evaluation. An expanded summary of their suggested framework is as follows:

1. Within the context of the issue, what are the objectives to be followed in attacking the problem?

2. What alternative courses of action need to be expiored?
   This component deals with available information about the problem and population affected by the target population.

3. Given each suggested alternative, what are the positive and negative impacts upon the target population?

4. A different method of analysis may be required for each alternative. Hence, what are the appropriate techniques for predicting the expected consequences?

5. In the case of uncertainty, what are the expected likelihoods for each outcome?

6. How will each set of objectives and expected impacts be valued? How important are the objectives? How important are the suggested solutions within the framework of the issue?

7. After all alternatives have been considered, how will the preferred course of action for a solution be decided?

The major key to this approach is that the authors are focusing upon the problem of issue as it exists. They are not offering to alter the problem definition to fit an existing evaluation design. Those readers who have experienced work in program evaluation see the importance of this framework. A well known statistician that he had never found a "real world" problem that fit into an existing research and evaluation design. We are all familiar with the joke about the doctoral student who has an analysis of variance design looking for a problem to fit it. Fitting existing design to problems never has worked in evaluation and research. Why? Because, behavioral and socioeconomic problems each need a modified design for analysis. Unfortunately, our major research organizations in education have not come to deal with this reality.

Stokey and Zeckhauser (1978), are among the few writers that deal with the fact of value laden objectives. The concern here is that if objectives are value packed and decision making is also loaded with value judgments, what research and evaluation designs are appropriate for this situation? How do we deal with this problem in conventional research and evaluation designs? Issues, problems, objectives, goals, as well as designs and solutions are value

oriented. these factors make policy evaluation a tough problem with which to deal. One possible approach to this problem is explored in the following section:

Program Level Planning and Evaluation Interface

Suchman (1967), defined evaluation as a social process of making judgments of worth. Program level evaluation as discussed herein may take on a similar definition. By pulling together the concepts and frameworks offered by the literature reviewed in previous sections, the following stages of program planning and evaluation are recommended:

1. A decision to plan and evaluate a program must be made by a person or group of persons with the capabilities of performing the evaluation or with the necessary resources to hire someone else to conduct it.
2. The context of the issue should be defined.
3. The initial course of action should be explained.
   a. What are the relevant issues?
   b. What are the goals and objectives of the feasible solutions for these problems?
4. Alternative causal impact models should be designed.
   a. What are the relevant behavioral and socioeconomic variables?
   b. Who is included in the target population?
   c. What relationships exist among the variables?
   d. What is the time frame between program implementation and expected short term and long term results?
   e. What research propositions describe the expected relationships among the variables?
   f. Are the relationships recursive or nonrecursive, direct or indirect?
5. Alternative research designs should match each causal impact model.
   a. Can an experiment be designed to test impact?

b. Will a quasi-experimental design provide an acceptable approach?

c. Will futuristic research methodology be sufficient to test expected impacts?

d. What new or models or modifications will be required?

e. How much time will be needed?

6. This procedure works under the assumption that goals have been expressed in measurable terms.

a. Are the long and short range objectives measurable?

b. What change has been made over a specific period of time?

c. What quantative and qualitative measures are appropriate?

7. The collection of data is dictated by the nature of the issue, the proposed or implied policy, the impact model, and the research design.

8. Data are analyzed, interpreted, and reported within the context of the issue.

If we define an issue as a controversial academic problem (Jones, 1984), then the context of program level planning and evaluation is narrowed to the behavior of the specified population and the social and economic conditions within the environment. The focus becomes the political actors and those people within the domain of the issue. The above framework rests upon this foundation where the concerns are causality, prediction, and change. The fact that the suggested framework is not necessarily a stepwise procedure allows for planning and evaluation interface.

Application: A Homely Example

Given the trends toward the reduction of higher education, how would this methodology apply to a selected issue? First, it is a fact that the decision to plan and implement new policy for evaluation has been made by officials at the top of the hierarchy in higher educational systems with thousands of actors -- students, faculty, administrators, and local, state, and

national policy makers plus the people who pay for the financing of education through taxation. Apparently this is one of the largest context of any public issue.

The intended course of action is the proposed improvement of our higher education system. Obviously the problem is larger than traditional evaluation designs and the major concern becomes clear goals and objectives for the many programs offered in the system. For example, should academic programs take precedent over all other educational offerings? If the perceived academic problems are solved, where will the majority of our students be with respect to the job market? Will American productivity be greater than foreign competition after expanded educational programs are implemented? In fact, perhaps we should decide if the American educational system should even attempt to provide a complete academic education for all.

In designing alternative causal impact models such variables as test scores or cognitive learning appear to be at the top of the list. Is learning the issue, or is the belief that a Toyota is better than the American made automobile the real issue? The assumption that there is a one to one relationship between superior test scores and the ability to build a good car leaves some question for assumptions. If test scores correlate positively with the production of good cars, then how long will it take the American market to recover. How long will it be before the negative trend of producing "bad" cars can be reversed?

Assume that we can design experiments to match each impact model that is implied in this example. How long would it take to change? How long will it take to measure change? Will the political public become impatient before we can document results? Will the public need results within four years or even sooner? Test scores can be greatly improved by sinply not testing the

poor students. Test scores can be improved through knowledge of Latin, for example. Test scores can, in fact, be improved by simply designing easier tests. After any feasible solution measured by appropriate evaluation, will the problem remain? This leads us to consider the original goals and objectives and compare impact and output of the academic program.

Perhaps the interface of program planning and evaluation will lead to new goals, new procedures, and new organizations. The proposed framework rests upon the assumption that goals and objectives have been described in measurable terms. That is, there must be a process for continuous refinement of goals and objectives in program planning and evaluation. The interface evaluation should take place during all phases of program planning and implementation.

BIBLIOGRAPHY

Adler, E. and McCarthy, D.P. School Improvement Project. Occasional paper. New York: New York City Public Schools. Office of Educational Evaluation, 1979.

Anderson, J.E. Public Policy Making (2nd. ed.). New York: Holt, Rinehart and Winston, 1979.

Arends, R. "The Use of Task Force Planning for School-Based Improvement Efforts." Planning & Changing, Winter, 1983, 223-233.

Bazaraa, S., and John J. Jarvis. Linear Programming and Network Flows. New York: Wiley, 1977.

Beers, C.D. et al. Policy Framework for Local Action: Lessons From Implementing the Teacher Corps: Guidelines. Menlo Park: SRI International, 1982.

Brookover, W.B. and others. "Elementary School Climate and School Achievement." Journal Research and Development in Education, 9, Fall 1975.

Brookover, W.B. and others. "Environment and Elementary School Achievement." East lansing, Michigan: Michigan State University, College of Urban Development, 1976.

Brookover, W.B. and Lezotte, L.W. Changes in School Characteristics Coincident with changes in Student Achievement. East Lansing, Mich.: Michigan State University, College of Urban Development, 1977.

Brookover, W.D. and others. School Social Systems and Student Achievement: Schools Can Make a Difference. Brooklyn, New York: Praeger Publishers, 1979.

Brophy, J. and Good, T. "Teacher Behavior and Student Achievement," in Merlin E. Wittrock, ed., Third Handbook of Research on Teaching, New York: Prentice-Hall, 1984.

Clayton, Ross and Glen, Robert. "Analyst's Look at PERT Through the Eyes of Scientists and Engineers." Navy Management, Review 7, no. 10 1962.

Dunn, R. and Ramsing, K. Management Science: A Practical Approach to Decision Making. New York: Macmillan Publishing Co., Inc., 1981.

Edmonds, R. "Some Schools Work and Move Can." Social Policy. 9(5) 1979, 28-32.

Edmonds, R. "A Discussion of the Literature and Issues Related to Effective Schooling." Presented at the National Conference of Urban Education, St. Louis, Missouri, July 1978.

Edmonds, R. "Effective Schools for the Urban Poor." Educational Leadership, 37, October 1979: pp. 15-27.

Fullan, M. "School District and School Personnel in Knowledge Utilization," in Lehming, R. and Kane, M. (Eds.) Improving Schools: Using What We Know. Beverly Hills, CA: Sage, 1982.

Guba, E.G., & Stufflebeam, D.L. Strategies for the Institutionalization of the CIPP Evaluation Model. An address delivered at the Eleventh Annual PDK Symposium on Educational Research sponsored by Phi Delta Kappa and the Ohio State University Evaluation Center, Columbus, Ohio, June 1970.

Hersh, R. "What Makes Some Schools and Teachers Move Productive?" Eugene, Oregon: Center For Educational Policy and Management, 1981.

Holland, Thomas C. & Grobe, Robert P. Campus level planning: A scheme for school-based charge and decision-making. Dallas, Texas: Dallas Independent School District, Department of Research, Evaluation, and Information Systems.

Holland, T.C., & Vogel, J. A Planning Model for School Based Decision Making (Report No. 75-853). Dallas, Texas: Dallas Independent School District, Department of Research, Evaluation and Information Systems, June 1976.

Isaac, S., & Michael, W. B. Handbook on Research and Evaluation. San Diego, California: Robert R. Knapp, 1974.

Jackson, Frank & Heeney, William. Campus Level Planning Model (Plan No. 71-310). Dallas, Texas: Dallas Independent School District, Department of Research, Evaluation, and Information Systems, 1974.

Jones, C. O. An Introduction to the Study of Public Policy. (3rd ed.). North Scituate, Mass.: Duxbury, 1984.

Kerr, D., "Teaching Competence and Teacher Education in the United States," in Lee Shulman and Gary Sykes, (eds.), Handbook of Teaching and Policy. New York: Longman, 1983.

Knotts, U. and Swift, E. Management Science for Management Decisions. Boston: Allyn and Bacon, Inc., 1982.

Madden, J.V. and others. "School Effectiveness Study: State of California." State of California, Department of Education, 1976.

Miles, M. "Mapping the Common Properties of Schools." Lehming, R. and Kane, M. (Eds.) Improving Schools: What We Know. Beverly Hills, CA: Sage, 1982.

Miller, Robert W. "How to Plan and Control with PERT." Harvard Business Review, March/April 1962: 93-104.

Morris, L. and Fitzgibbon, C. How to Measure Program Implementation. Beverly Hills, CA: Sage, 1978.

Morris, L. and Fitzgibbon, C. How to Design a Program Evaluation. Beverly Hills, CA: Sage, 1979.

Morris, L.N. Critical Path--Construction and Analysis. New York: Pergamon Press, 1967.

Nachmias, D. Public Policy Evaluation. New York: St. Martin's, 1979.

National Commission on Excellence in Education. A Nation at Risk (U.S. Department of Education). Washington, D.C., 1983.

Nelson, D. "Instructional Leadership and School Effectiveness." Kansas School Board Journal. 23(1), 17-23.

Nelson, D. "School Leadership and Reading Achievement: Eight Case Studies," a paper presented at the International Reading Association in Atlanta GA., 1983.

Peters, G.H. Cost Benefit Analysis and Public Expenditure. London: Institute of Economic Affairs, 1978.

Poland, OF.F "Why Does Public Administration Ignore Evaluation?" Public Administration Review, 31, (March/April 1971), 201-202.

Quade, E.S. Analysis for Public Decisions. New York: Elsevir, 1979.

Rosenthal, R. and Rubin, D. "A Note on Percent Variance Explained as a Measure of the Importance of Effects," Journal of Applied Social Psychology, 9, 1979, p. 395-407.

Schoderbek, Peter P., et al. Management Systems: Conceptual Considerations. Dallas: Business Publications, 1975.

Stokey, E. & Zeckhauser, R. A Primer for Program Analysis. New York: W.W. Norton, 1978.

Suchman, E.A. Evaluative Research. New York: Russell Sage Foundation, 1967.

Task Force on Education for Economic Growth. Action for excellence (Education Commission of the States). Denver, Colorado, 1983.

Weatherman, R. & Swenson, K. Delphi technique. In S.P. Hencley & J.R. Yates (eds.). Futurism in education. Berkeley Cal.: McCutchan, 1974.

Wildavsky, A. "If Planning Is Everything Maybe It's Nothing." Policy Sciences, 4, (1973), 127-153.

Weiss, C.H. Evaluation Research: Methods of Assessing Program Effectivenes. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Weiss, C.H. Evaluating Action Programs: Readings in Social Action and Education. Boston: Allyn and Bacon, 1982.

Wellisch, Jean B. and others. "School Management and Organization in Successful Schools. Sociology of Education, 51, July 1978, pp. 211-226.

White, M., Clayton, R., Myrtle, R., Siegal, G., and Rose, A. Managing Public Systems: Analytic Techniques for Public Administration. North Scituate, MA.: Duxbury Press: 1980.